

# **NOTICE**

**All drawings located at the end of the document.**

#000024761

4.00 - 7.03



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2405

Ref: 8HWM-FF

EPA REGION VIII  
HAZARDOUS WASTE MANAGEMENT DIVISION  
CERCLA/HSWA COMPLIANCE INSPECTION REPORT

FACILITY NAME: U.S.D.O.E. - Rocky Flats Plant

EPA ID No.: C07890010526

LOCATION: Golden, Colorado

FACILITY CONTACT: Tom Greengard, EG&G  
Margaret Wilson, DOE

TELEPHONE: (303) 966-7121  
(303) 966-4765

NOTIFICATION: Generator, TSD

TYPE OF INSPECTION: HSWA Corrective Action Inspection  
CERCLA Oversight Inspection

PARTICIPANTS: Martin Hestmark, EPA  
Patty Corbetta, CDH  
Noreen Matsuura, CDH  
Tom Olsen, DOE  
Paul Singh, DOE  
Brent Lewis, EG&G  
Jim Wulff, PRC

WEATHER CONDITIONS: Cloudy, Drizzle, Cold - 3/23/90  
Clear, Cool - 3/26/90

TIME IN: 9:00 am, 3/23/90 13:30 pm, 3/26/90

TIME OUT: 16:15 pm, 3/23/90 17:15 pm, 3/26/90

ADMIN RECORD

A-OU01-000911

The inspectors arrived at the East Gate of the facility at 9:00 am on March 23, 1990. The purpose of the inspection was to evaluate the construction and drilling progress, practices and procedures pertaining to the 881 Hillside (OU 1) Interim Measure/Interim Remedial Action (IM/IRA). Of specific interest were the procedures and practices relating to documentation of health and safety requirements outlined in DOE internal documents and public concerns delineated during the public comment period for the proposed IM/IRA Decision Document and committed to by DOE and EG&G in their response to the public comments.

The January, 1989, Health and Safety Plan for the Environmental Restoration Program within Rockwell International details specific procedures to be followed prior to drilling. These procedures are referenced within the Health and Safety Plan in Section 6.0 and in Appendix B, the Operational Safety Analysis. These procedures include; utilization of excavation and land use permits, access restriction, radiation surveys of personnel, equipment and drilling locations, ambient air sampling, suspension of operations if wind velocity exceeds 15 mph, preparation of access paths to prevent resuspension of contaminated soils, radiation and volatile organic monitoring of drill cuttings and drilling fluids, screening and appropriate labeling and disposal of trash generated through drilling operations.

Specific public concerns defined during the public comment period included preventing resuspension of contaminated soils. In response to this, DOE committed in the text of the Responsiveness Summary for OU 1 IM/IRA, to suspend operations if wind speed measurements exceeded 15 mph or "hi-vol" radiation measurements from immediately downwind measurement stations exceeded  $0.03 \text{ pCi/m}^3$  gross alpha.

After arriving, the inspectors were driven to the operating drilling locations within the 881 Hillside Operable Unit. The inspectors were introduced to Mr. Jeffrey Herrick, a geologist for Weston, contractor to EG&G/DOE. Mr. Herrick informed the inspectors that neither "coherex", nor any other soil binders, were used prior to drill rigs driving to drill locations. Mr. Herrick informed the inspectors that the drill location was not prepared with "coherex" or any other soil binder prior to drilling. No "hi-vol" radiation samplers were present at either of the two drill rig locations. Mr. Herrick informed the inspectors that the wind speed criteria for suspending drilling operations was set at 35 mph, not 15 mph.

At this time, Mr. Brent Lewis informed the inspectors that the procedures established within the Health and Safety Plan and Operational Safety Analysis had not been updated since the 1987 drilling operations. During the 1987 drilling program, these procedures had been followed, but the radiation results from "hi-

vol" monitoring had not indicated a need to continue these procedures. Mr. Lewis stated that HNu and alpha radiation readings were still routinely performed. Mr. Lewis indicated that there was a distinct lack of coordination between the various divisions within EG&G which managed different aspects of the work related to this IM/IRA. Mr. Lewis stated that Facilities Project Management was responsible for construction management and that the procedures utilized by this division were entrenched and had little relationship to the requirements of the Environmental Restoration Program within EG&G.

The inspectors observed drill core extracted from borehole B301590. The core was wrapped in aluminum foil to preserve its moisture content. Two foot coring samples were collected to facilitate evaluation of french drain placement for the IM/IRA and for evaluation of geotechnical characteristics also to facilitate french drain design. The tests to be performed on the cores included sorting and grain size measurements, shear tests and permeability tests.

At this time the inspectors were escorted to the treatment plant construction site and to the site of the decontamination pad. The inspectors noted that no "hi-vol" samplers were in the immediate vicinity of the construction area. Electrical conduit distribution points were noted at locations surrounding the construction site. The surficial soils were disturbed. Mr. Tom Olsen then related his dissatisfaction with EG&G's inability to remove the drill trash. The inspectors noted approximately 50 trash bags in and around the decontamination pad area. Mr. Olsen stated that a Mr. Majestic (sp.?), an employee of EG&G, had designated that these wastes were low-level radioactive waste but had not produced any information to document this designation. The inspectors noted that the decontamination pad was full of water, presumably decontamination water. The inspectors were informed that because the five decontamination water holding tanks were full, the water could not be pumped out of the pad and decanted into the two horse troughs and stored in the holding tanks. The inspectors were then informed that drilling operations were being suspended due to this problem. Mr. Lewis stated that because building 374 was receiving other plant waters to be treated, the stored decontamination waters could not be transported to the treatment facilities within building 374. The five holding tanks and two decantation troughs were located within a HDPE lined berm and appeared to be adequately secondarily contained. The inspectors noted that unmarked barrels containing drill cuttings were stored south of the "decon" pad. When questioned about this practice, Mr. Lewis stated that designation of the barrels and ultimate dispensation were awaiting the results of analytical determinations. Mr. Lewis stated that accumulation dates would be noted on the drums once analytical results identified the drum contents as hazardous waste.

The inspectors were then escorted back to trailers T-130, the DOE offices. While the responsible managers within EG&G and DOE were being located for a post-inspection briefing, time was taken to eat lunch.

After lunch the EPA and CDH inspectors were joined by Mr. Bill Bruninga, Mr. Greg Williams and Mr. Ike Duran from the Facilities Project Management Division and Mr. Wendell Ogg of DOE. The three former gentlemen were responsible for the management of the treatment building foundation contract. Mr. Hestmark stated his concern regarding the apparent non-conformance with internal EG&G Health and Safety Plans and the 881 Hillside IM/IRA Responsiveness Summary, and the apparent lack of coordination between the various groups within EG&G responsible for the project. Mr. Hestmark asked DOE and EG&G representatives to present documentation indicating that these practices and procedures were in place. The DOE and EG&G representatives could not produce such documentation. At this time Ms. Margaret Wilson and Mr. Rich Schassburger, both employees of DOE, joined the meeting. Mr. Hestmark reiterated his concerns. After receiving a summary of previous findings from Mr. Tom Olsen, Ms. Wilson asked what EPA and CDH planned to do with respect to the findings of the inspection. Mr. Hestmark stated that DOE must present documentation of the required procedures and practices by Monday, March 26, 1990 at 13:30. Mr. Hestmark stated that until such documentation is presented no construction will be allowed to proceed pertaining to the 881 IM/IRA.

On Monday March 26, 1990, Martin Hestmark, Patty Corbetta and Jim Wulff attended a meeting at the DOE offices within building T-130. In attendance were Scott Grace, Tom Olsen, Margaret Wilson and Rich Schassburger, all employees of DOE; and Mike Arndt, Wanda Busby, Tom Greengard, Bob James, Joe Herbert, Bill Bruninga, Gary Anderson and Brent Lewis, all employees of EG&G.

Margaret Wilson opened the meeting by stating that until an integrated Health and Safety Plan for the ER program is complete and a revised and coordinated Quality Assurance Project Plan is in place, Jack Kersh, Environmental Waste Management and Waste Manager for EG&G, has suspended any further phases of construction relating to the 881 IM/IRA. Ms. Wilson stated that the Facilities Project Management has had different health and safety constraints than those governing CERCLA actions. Ms. Wilson stated that the facility does not presently have an integrated Health and Safety Plan. Ms. Wilson stated that phase IB of the IM/IRA construction has not been let out for bid. Tom Greengard stated that this decision was made approximately three weeks ago. Mr. Greengard stated that this decision was predicated on internal decisions to manage all aspects of the

environmental restoration projects from within the Environmental Restoration Program. Ms. Wilson stated that DOE is interested in finishing phase IA of construction as it is presently managed, i.e. under Facilities Project Management, and that this aspect of the project will require approximately 5 working days and involves pulling cable to the distribution boxes and pouring a concrete floor slab for the treatment building. Ms. Wilson stated that DOE would complete this aspect of the project only if allowed by EPA and CDH.

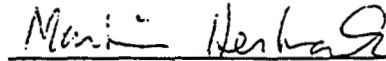
At this time Mr. Bruninga presented various documentation associated with the construction of the treatment building. Mr. Bruninga presented examples of work permits, weekly activity summaries, lost time reports, weekly safety meetings and, contractor monthly equipment inspections. Mr. Bruninga referred to Health, Safety and Environmental (HS&E) inspections and wind speed monitoring, for which he did not have documentation. Mr. Bruninga stated that the lost time reports should correlate to sustained wind speeds greater than 15 mph. Wanda Busby stated that the meteorology group within the plant maintains 15 minute averages for wind speed and direction for all times of construction. Mr. Bruninga stated that HS&E took samples and monitored the construction site prior to the start-up of construction. These samples are still at the lab. The inspectors noted that no quantitative definition of "sustained 15 mph winds" existed for which suspension of operation decisions could be made. Mr. Bruninga stated that a Health Physics notebook had been devoted to this project, within which all radiation monitoring data should reside. Mr. Bruninga stated that efforts were underway to import "real-time" radiation expertise and equipment from Oak Ridge National Laboratory to be used for future projects.

After presenting this information, Ms. Wilson inquired as to whether EPA and CDH would allow phase IA to be completed (pouring the floor slab and pulling the electrical wire). Mr. Hestmark stated that the presented documentation still did not verify that practices and procedures required by the various health and safety plans and the public comment on the IM/IRA Decision Document were utilized. Mr. Hestmark stated that the "no news is good news" style of documentation will not be acceptable to EPA or the public. Mr. Hestmark then stated that all documentation must be organized to verify that the plant has complied with its own plans and its commitments to the public. Mr. Greengard committed to inform EPA and CDH when they could review this information. At this time EPA and CDH stated that if a "real-time" anemometer were installed at the location of the existing "hi-vol" radiation monitor and the analytical results of the previous months "hi-vol" samples were received and were below the 0.03 pCi/m<sup>3</sup> level, then the contractor could pull cable. Once cable pulling was completed, the three new "hi-vol" radiation monitors must be installed before EPA and CDH will allow the

floor slab to be poured. Ms. Wilson committed to documenting these requirements in a letter either to EPA and CDH, copying EG&G, or with a letter to EG&G with a copy sent to EPA and CDH. Mr. Hestmark stated that a follow up letter must also be sent documenting that these requirements were met prior to reinitiating construction.

Mr. Greengard then stated that there is limited information in the hands of EG&G documenting any of the practices and/or procedures to be followed during drilling. Mr. Lewis stated that Weston may have some of the required documentation. Mr. Greengard stated that drilling is not considered construction. Mr. Greengard and Mr. Lewis stated that drilling also requires an excavation permit. The excavation permit will contain information noting the requirement for soil binder application. This requirement would also be reflected on the work permit. Mr. Greengard stated that "coherex" (a soil binder) had not been used. Mr. Greengard stated that the 15 mph wind speed limit had not been the criteria used for suspension of operations. The criteria used was 35 mph and was based upon drilling safety, not resuspension of contaminated soils. Mr. Lewis stated that no HS&E audits had been performed, to his knowledge, but that radiation surveys are conducted at the drill site locations prior to set-up and that drill cuttings were surveyed for radiation. Mr. Lewis stated that approximately three weeks of drilling were left to be completed. At this time Mr. Greengard inquired as to whether EPA and CDH would allow the drilling operation to continue. Mr. Hestmark and Ms. Corbetta responded that if EG&G had adequate procedures in place, regardless of whether they were approved by EPA and CDH, drilling could continue. EPA and CDH were reluctant to delay the drilling program, but stated that it would be prudent for EG&G and DOE to get organized and regroup. At this time, Mr. Greengard stated that drilling operations would continue to be suspended until an integrated Health and Safety Plan was developed. Mr. Hestmark stated that documentation of the practices and procedures followed for the drilling program must be organized and made available to EPA and CDH. Mr. Greengard stated that he would inform EPA and CDH when this information was available.

CDH and EPA presented DOE with a Notice of Inspection (attached) detailing the items inspected. The notice was signed by Margaret Wilson of DOE. This concluded the inspection.

  
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Martin C. Hestmark  
Chemical Engineer/RPM

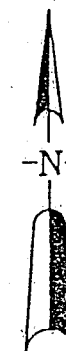
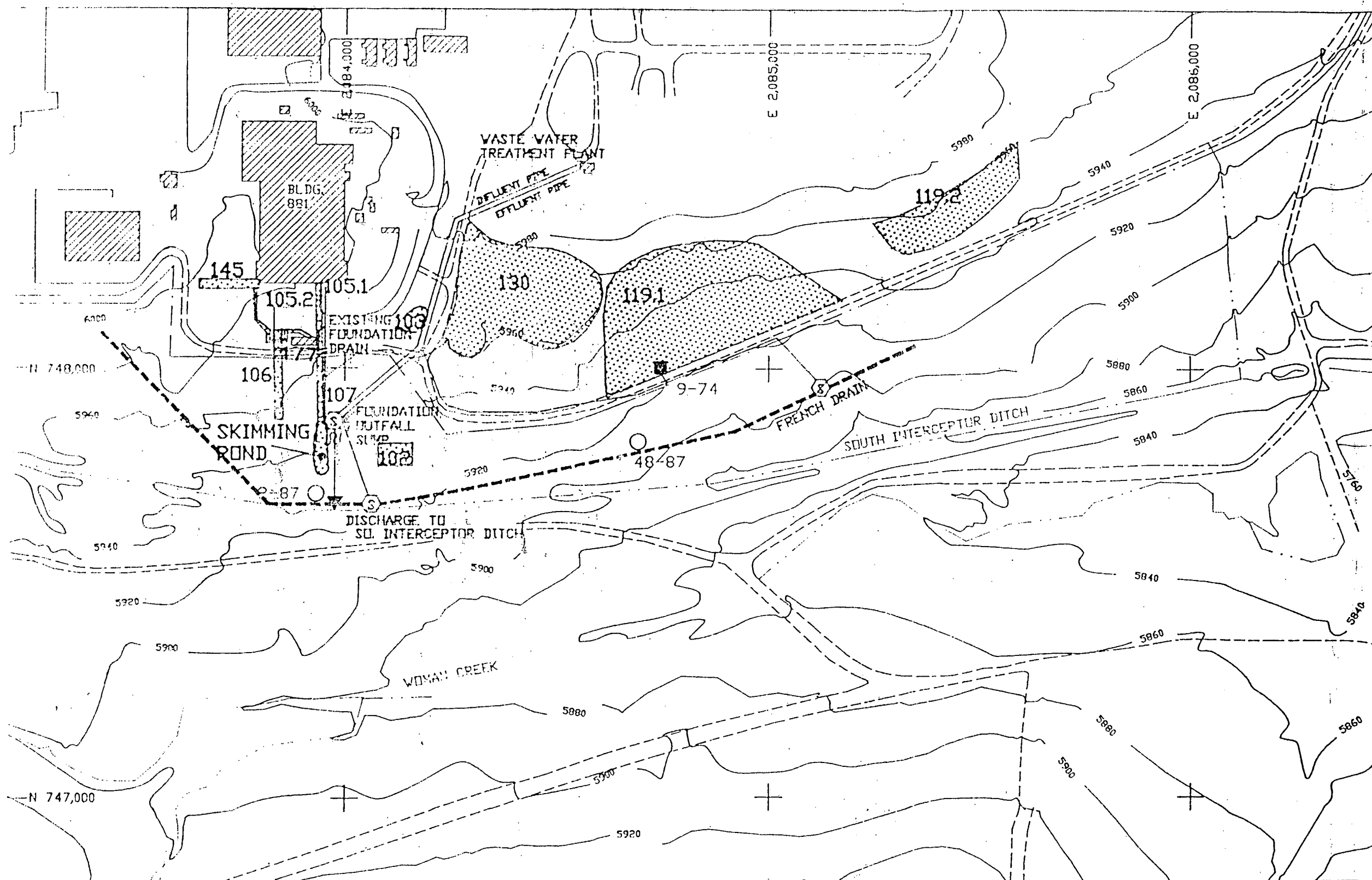
3/27/90  
\_\_\_\_\_  
Date

**COLORADO DEPARTMENT OF HEALTH  
WASTE MANAGEMENT DIVISION**  
4210 EAST 11TH AVENUE DENVER, COLORADO 80220

## NOTICE OF INSPECTION

Date <b>3/26/90</b>	Inspector <b>CORBETTA</b>	Hour In: <b>1:30 pm</b> Out: <b>5:02 pm</b>	Inspection Type Small Quantity Gen ( ) S Generator ( ) G Transporter ( ) T Land Disposal TSDF (X) L Non-Land Disposal TSDF ( ) F Non-Notifier ( ) N
Facility Name: <b>ROCKY FLATS PLANT</b>		EPA I.D. # <b>COD7890010526</b>	Evaluation Type  Evaluation Inspection ( ) 1 Sampling Inspection ( ) 2 Record Review (X) 3 Ground Water Monitoring ( ) 4 Enforcement Followup ( ) 5 Citizen Complaint ( ) 6 Part B Call-In ( ) 7 Withdrawal Candidate ( ) 8 Closed Facility ( ) 9 Violation Decision ( ) 10 Case Development ( ) 11 Operation Evaluation (X) 12
Telephone # <b>966-2762</b>			
Street P.O. BOX <b>928</b>			
City <b>GOLDEN</b>	State <b>CO</b>	Zip <b>80204</b>	
Facility Representative(s) <b>MARGARET WILSON</b> <b>TOM OLSEN</b>		Title <b>Env. Engineer</b> <b>HYDROLOGIST</b>	
Entered by Consent (X) Warrant ( )			
Inspection Arranged Prior to Inspection (X) YES ( ) NO		Initial Evaluation Date <b>3/23/90</b>	
Samples requested and received by facility: [ ] YES [ ] NO If YES: [ ] Duplicate [ ] Split			
Samples, Documents, Plans, and / or Photos Collected			Date To Lab
1.			
2.			
3.			
4.			
Area(s) of Evaluation Land Ban { } Ground Water Monitoring ( ) Closure / Post Closure ( ) Financial Responsibility ( ) Part B ( ) Compliance Schedule ( ) Manifest ( ) Other <b>881 Hillside IM</b> (X)		Comments Noted inadequate documentation pertaining to IM/IRA procedures per approved Decision Document. Noted inconsistencies of internal Health and Safety Plan and procedures implemented.	
The facts established by this inspection will be reviewed by State personnel. A final determination of your facility's compliance with State Regulations will be made as a result of this review. The review may reveal additional violations.			
Responsible Agency State ( ) EPA ( ) Oversight ( ) Joint (X) <b>Martin Hestmark-EPA</b>			
Receipt of this Notice of Inspection Form is Acknowledged  <b>Margaret Wilson</b> <b>3-26-90</b> Signature of Facility Representative		Lead Inspector <i>Patricia A. Corbetta</i> <i>Martin Hestmark</i> Assisting Inspector(s)	





SCALE: 1"=300'

## EXPLANATION



SOLID WASTE MANAGEMENT UNITS



FRENCH DRAIN SYSTEM



SUMPS (location finalized during detail design)



9-74

RECOVERY WELL



48-87

ALLUVIAL MONITORING WELLS

FIGURE 4-8